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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,793	07/23/2001	Martin Achtenhagen	2500.380	2661

7590 11/04/2002

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[REDACTED] EXAMINER

NGUYEN, TU T

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2877

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	H Applicant(s) ACHTENHAGEN ET AL.
	09/909,793	
	Examiner Tu T Nguyen	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 . | 6) <input type="checkbox"/> Other: _____ . |

Detailed Office Action

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi et al (5,724,126).

With respect to claim 1, Nishi discloses a method for measuring a time delay. The method comprises: inputting a modulated pump signal to generate Raman gain (column 2, lines 50-55; column 1, lines 25-30) into the input end of the waveguide 6 (fig 16), inputting a probe signal (column 2, lines 50-55), combining the two signals 5 (fig 1), impressing the combined signal to the waveguide 6 (fig 16), varying the frequency of the pump signal (column 3, lines 45-50), detecting the output signal at the output end of the fiber 8 (fig 1), measuring the group delay (column 1, lines 25-30).

Nishi does not explicitly disclose a narrowband signal. However, using a narrowband signal for calculating the group delay would have been known. It would have been obvious to modify Nishi with a narrowband input signal to make the system more accurate.

With respect to claims 2,5,9, Nishi discloses detecting the output signal at the output end 7 (fig 1) of the fiber. However, Nishi does not disclose a step of separating the probe and the pump signal. Using a separation means to separate two signals would have been known. It would have been obvious to modify Nishi's method with a known separating means to separate the pump and the probe signal for calculating the group delay easier.

With respect to claim 3, Nishi does not explicitly disclose the group delay equation. However, using the group delay equation for calculating the delay would have been known. it would have been obvious to modify Nishi's method with a known equation for calculating the group delay to make the system more efficient. The modification involves only routine skill in the art.

With respect to claim 4, refer to discussion in claim 1. Further, Nishi discloses varying the probe signal 34 (fig 16).

With respect to claim 6, Sellmeier's equation is a known equation for determining the chromatic dispersion. It would have been obvious to modify Nishi's method with Sellmeier's equation to make the measurement more accurate.

With respect to claim 7, refer to discussion in claim 1 above.

With respect to claim 8, refer to discussion in claim 1 above for the combining means.

With respect to claims 10-12, the claimed external modulator, electrical modulator, optical modulator would have been known. It would have been obvious a design choice to substitute Nishi's system with different known modulators to meet the system requirement. The modification involves only routine skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Tu Tuan Nguyen

Patent Examiner TC 2877

11/3/02